### **About the Author**



Dr. Savita Marutirao Sukte

Dr. Savita Marutirao Sukte has served as Lecturere in different Colleges of M. S. P. Mandal Since 1994, Currently she is serving as Head and Assistant professor in M. S. P. Mandals, Balbhim Arts Sci. and com. College Beed.

She was awarded Ph. D. degree in Physiological Studies on some Field Crops of Beed District in 2006

She has published more than 20 research papers in several reputed journals at National, international levels.

She has also presented different articles in seminar, conferences, workshops. She is life member of Marathwad Botanical Society (MBA).

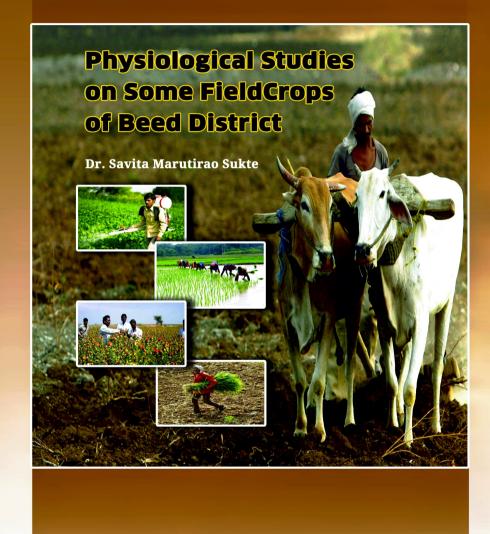






LAXMI BOOK PUBLICATION, Solapur Ph.: 0217-2372010 / +91-9595-359-435 Email. apiguide2014@gmail.com ayisrj2011@gmail.com Website: Ibo.world Published by





# Physiological Studies on Some Field Crops of Beed District

Dr. Savita Marutirao Sukte

LAXMI BOOK PUBLICATION 2018



Price: /-

## Physiological Studies on Some Field Crops of Beed District

### Dr. Savita Marutirao Sukte

### © 2018 by Laxmi Book Publication, Solapur.

All rights reserved. No part of this publication may be reproduced or transmitted, in any form or by any means, without prior permission of the author. Any person who does any unauthorized act in relation to this publication may be liable to criminal prosecution and civil claims for damages. [The responsibility for the facts stated, conclusions reached, etc., is entirely that of the author. The publisher is not responsible for them, whatsoever.]

ISBN-978-0-359-10756-8

Published by, Lulu Publication 3101 Hillsborough St, Raleigh, NC 27607, United States.

Printed by, Laxmi Book Publication, 258/34, Raviwar Peth, Solapur, Maharashtra, India. Contact No.: 9595359435 Website: http://www.lbp.world

Email ID: apiguide2014@gmail.com

# **DEDICATED TO**

**MY PARENTS** 

Shri. Maruti N. Sukte Saw. Saraswati M. Sukte

### **ACKNOWLEDGEMENTS**

I wish to express my deep sense of gratitude to Dr. A.M. Mungikar, Professor, Department of Botany, Dr. Babasaheb Ambedkar Marathwada University, Aurangabad for his valuable guidance and ever willing help, which enabled me to complete this piece of work.

I am grateful to Prof. D.S. Mukadam, Head, Department of Botany, for providing laboratory facilities during my research work.

I am grateful to Prof. L.V. Gangawane, Prof. N.P. Vaikos, Dr. P.B. Papdiwal, Dr. Bharati Jadhav, Dr. V.S. Kothekar, Dr. S.S. Barve, Dr. A.S. Dhabe and Dr. A.B. Ade for their valuable suggestions during my research.

I am also thankful to all the non-teaching staff of the Department of Botany for extending hands in one way or the other during this work.

I wish to express my deep sense of gratitude to Hon. Annasahebji Awargawkar, Vice-President of Marathwada Shikshan Prasarak Mandal, Aurangabad by whose blessing and ever willing help I am able to complete this piece of work.

It is my pleasure to express my sincere gratitude to Principal A.R. Patil and Vice-Principal B.R. Solunke, Arts, Commerce and Science College, Kille Dharur, for their cooperation. I am specially thankful to Prof. K.T. Thale for providing laboratory facilities during his period.

Words are inadequate to express my heartfelt thanks to my colleague and friend Mr. Ravikiran Sawant, Head, Department of Botany, Arts, Commerce and Science College, Kille Dharur, who has always been pillar of strength and his understanding, constant encouragement, ever willing help during my research work, which enabled me to complete this piece of work. I am equally thankful to

Saw. Vaishali Sawant for her encouragement during the present investigation.

I wish to record my thanks to Dr. R.J. Chavan and Dr. M.B. Tat for their encouragement during present research work. I extend my thanks to G.K. Kakade, M.N. Gaikwad, M.N. Jogade, D.T. Ghogare, P.A. Shingare, M.F. Sawant and S.N. Shinde.

I especially thankful to V.V. Deshpande, Librarian for his ever willing help and encouragement. It is also pleasure to express my thanks to all non-teaching staff of the college, Mr. D.B. Velhal, P. Moralwar, S.S. Tale, S.S. Bagade, S.R. Yanchwad, L.P. Waghmare, for their cooperation during present research work.

I must express my grateful thanks to Saw. Kamaltai Shingare.

It is my pleasure to record my thanks to Lilawati J. Sawant.

I express my thanks to Principle N.K. Bagul and Saw. N.V. Bagul. I feel pleasure to thanks to Dr. Uttam Salve, Dr. Dayanand Gogle, Dr. Santuk Kawathekar, Dr. Vandana Baviskar, Dr. Sayyed Illiyas, Dr. Beula Joshiphin, Dr. Doiphode for their help in various ways.

I also record my thanks to Mr. A.M. Ade, A.P. Pandit and Mr. Soma Shinde who help me in doing field work during present investigation.

I express my thanks to Mr. Kaleem Ahmed for neat typing, Mr. Zubair Ahmed for computing data and illustrations for figures of this thesis.

It is a matter of great pleasure to extend my heartfelt thanks to my parents Shri Maruti Namaji Sukte, Saw Saraswati Maruti Sukte for their support and encouragement.

I also express my thanks to my sister Saw. Urmilatai, Rama, Sudha, Sandhya, Vasudha, Surekha and my brother Shivkumar Sukte for their cooperation.

Savita M. Sukte

# **CONTENTS**

SR. NO.	CHAPTER NAME	PAGE NO.
1	Introduction And Review of Literature	1
2	Topography of the region and about the plants	8
3	Effect of Deproteinised Leaf Juice (DPJ) and Plant Growth Regulators (PGRs) on seed germination	15
4	Growth and Productivity of Groundnut, Fenugreek and Spinach under the influence of fertilizer Nitrogen (N) and Phosphorus (P)	27
5	Effect of Deproteinised Leaf Juice (DPJ) and Urea on Growth and productivity of Groundnut, Wheat and Rice	113
6	Fertilizer Nitrogen (N) effect on productivity of Sorghum and Pearl millet	190
7	Summary and Conclusions	204
	Bibliography	209